Our Changing World

Project Learning Tree Activity #86

Program of Studies

Science:

- S-P-SI-1(ask simple scientific questions that can be answered through observations.)
- S-P-SI-2 (use simple equipment (e.g., aquariums), tools (e.g., magnifiers, spoons), skills (e.g., observing, pouring), technology (e.g., video discs), and mathematics in scientific investigations.)
- S-P-SI-3 (use evidence (e.g., observations) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- S-P-SI-4 (Students will design and conduct different kinds of simple scientific investigations.)
- S-P-SI-5 (communicate (e.g., speak, draw) designs, procedures, and results of scientific investigations.)
- S-P-SI-6 (question scientific investigations and explanations of other students.)
- S-P-AC-5 (Students will demonstrate how the study of science (e.g., ecology, chemistry) helps explain changes in environments (e.g., pollution).)
- S-4-SI-1 (ask simple scientific questions that can be answered through observations combined with scientific information)
- S-4-SI-2 (use simple equipment (e.g., plant lights), tools (e.g., rulers, thermometers), skills (e.g., describing), technology (e.g., electronic media), and mathematics in scientific investigations.)
- S-4-SI-3 (use evidence (e.g., descriptions) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- S-4-SI-4 (Students will design and conduct different kinds of simple scientific investigations.)
- S-4-SI-5 (communicate (e.g., graph, write) designs, procedures, and results of scientific investigations.)
- S-4-SI-6 (Students will review and ask questions about scientific investigations and explanations of other students.)
- S-4-LS-9 (Students will understand that organisms change the environment. These changes may be detrimental or beneficial.)
- S-5-SI-1 (use simple equipment (e.g., plant lights), tools (e.g., rulers, thermometers), skills (e.g., describing), technology (e.g., electronic media), and mathematics in scientific investigations.)
- S-5-SI-2 (use appropriate equipment (e.g., watches), tools (e.g., rain gauges), techniques (e.g., classifying), technology (e.g., calculators), and mathematics in scientific investigations.)
- S-5-SI-3 (use evidence (e.g., classifications), logic, and scientific knowledge to develop scientific explanations.)
- S-5-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)

- S-5-SI-5 (communicate (e.g., draw, speak) designs, procedures, and results of scientific investigations.)
- S-5-SI-6 (review and analyze scientific investigations and explanations of other students.)
- S-5-ESS-3 (Students will investigate living organisms' effects (e.g., changes in the composition of the atmosphere and the environment) on the Earth system.)
- S-5-LS-1(Students will recognize the relationship between structure and function at all levels of organization (e.g., organ systems, whole organisms, ecosystems).)
- S-5-AC-1(Students will examine the role of science in explaining and predicting natural events (e.g., floods, earthquakes, volcanoes).)
- S-5-AC-3 (Students will recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.)
- S-6-SI-1 (identify and refine questions that can be answered through scientific investigations combined with scientific information.)
- S-6-SI-2 (use appropriate equipment (e.g., binoculars), tools (e.g., beakers), techniques (e.g. ordering), technology (e.g., calculators), and mathematics in scientific investigations.)
- S-6-SI-3 (use evidence (e.g., orderings, organizations), logic, and scientific knowledge to develop scientific explanations.)
- S-6-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-6-SI-5 (communicate (e.g., speak, write) designs, procedures, and results of scientific investigations.)
- S-6-SI-6 (Students will review and analyze scientific investigations and explanations of other students.)
- S-6-LS-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-6-LS-5 (Students will investigate factors (e.g., resources, light, water) that affect the number of organisms an ecosystem can support.)
- S-6-AC-2 (Students will recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.)
- S-7-SI-1(Students will identify and refine questions that can be answered through scientific investigations combined with scientific information.)
- S-7-SI-2 (Students will use appropriate equipment (e.g., spring scales), tools (e.g., spatulas), techniques (e.g., measuring), technology (e.g., computers), and mathematics in scientific investigations.)
- S-7-SI-3 (Students will use evidence (e.g., measurements), logic, and scientific knowledge to develop scientific explanations.)
- S-7-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-7-SI-5 (Students will communicate (e.g., write) designs, procedures, and results of scientific investigations.)
- S-7-AC-2 (Students will describe the effects of science and technology (e.g., television, computers) on society.)
- S-8-SI-1 (identify and refine questions that can be answered through scientific investigations combined with scientific information.)

- S-8-SI-2 (Students will use appropriate equipment (e.g., barometers), tools (e.g., meter sticks), techniques (e.g., computer skills), technology (e.g., computers), and mathematics in scientific investigations.)
- S-8-SI-3 (use evidence (e.g., computer models), logic, and scientific knowledge to develop scientific explanations.)
- S-8-SI-4 (design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-8-SI-5 (communicate (e.g., write, graph) designs, procedures, and results of scientific investigations.)
- S-8-SI-6 (Students will analyze diversity and adaptations (e.g., changes in structure, behaviors, or physiology.)
- S-8-ESS-1(Students will investigate the structure of the Earth system (e.g., lithosphere, rock cycle, water cycle, weather, climate).)

Core Content

Science:

- SC-E-SI-1 (ask simple scientific questions that can be investigated through observations combined with scientific information)
- SC-E-SI-2 (use simple equipment (e.g., magnifiers, magnets), tools (e.g., metric rulers, thermometers), skills (e.g., classifying, predicting), technology (e.g., electronic media, calculators, World Wide Web), and mathematics in scientific investigations.)
- SC-E-SI-3 (use evidence (e.g., observations, data) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- SC-E-SI-4 (design and conduct simple scientific investigations.)
- SC-E-SI-5 (communicate (e.g., draw, graph, write) designs, procedures, observations, and results of scientific investigations.)
- SC-E-SI-6 (review and ask questions about scientific investigations and explanations of other students)
- SC-E-2.3.1(The surface of the Earth changes. Some changes are due to slow processes such as erosion or weathering. Some changes are due to rapid processes such as landslides, volcanic eruptions, and earthquakes.)
- SC-E-3.3.1(Plants make their own food. All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.)
- SC-E-3.3.2 (The world has many different environments. Distinct environments support the lives of different types of organisms. When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.)
- SC-E-3.3.3 (All organisms, including humans, cause changes in the environment where they live. Some of these changes are detrimental to the organism or to other organisms; other changes are beneficial (e.g., dams built by beavers benefit some aquatic organisms but are detrimental to others).)
- SC-M-SI-1 (refine and refocus questions that can be answered through scientific investigation combined with scientific information)
- SC-M-SI-2 (use appropriate equipment, tools, techniques, technology, and mathematics to gather, analyze, and interpret scientific data.)
- SC-M-SI-3 (use evidence (e.g., computer models), logic, and scientific knowledge to develop scientific explanations.)
- SC-M-SI-4 (design and conduct scientific investigations.)

- SC-M-SI-5 (communicate (e.g., write, graph) designs, procedures, observations, and results of scientific investigations.)
- SC-M-SI-6 (review and analyze scientific investigations and explanations of other students.)
- SC-M-1.3.4 (The Sun is a major source of energy for changes on Earth's surface. The Sun loses energy by emitting light. A tiny fraction of that light reaches Earth, transferring energy from the Sun to Earth.)
- SC-M-3.5.1 (A population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem.)
- SC-M-3.5.2 (Populations of organisms can be categorized by the function they serve in an ecosystem. Plants and some microorganisms are producers because they make their own food. All animals, including humans, are consumers, and obtain their food by eating other organisms. Decomposers, primarily bacteria and fungi, are consumers that use waste materials and dead organisms for food. Food webs identify the relationships among producers, consumers, and decomposers in an ecosystem.)
- SC-M-3.5.3 (For most ecosystems, the major source of energy is sunlight. Energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis. That energy then passes from organism to organism in food webs.)
- SC-M-3.5.4 (The number of organisms an ecosystem can support depends on the resources available and abiotic factors (e.g., quantity of light and water, range of temperatures, soil composition). Given adequate biotic and abiotic resources and no diseases or predators, populations (including humans) increase at rapid rates. Lack of resources and other factors, such as predation and climate, limit the growth of populations in specific niches in the ecosystem.)